


Fall 2013

# Iowa Academy of Science: The New Bulletin, v9n2, Fall 2013

Iowa Academy of Science

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# Iowa Academy of Science

## The New Bulletin

Volume 9 Number 2 Fall 2013



*The Iowa Academy of Science is established to further scientific research and its dissemination, education in the sciences, public understanding of science, and recognition of excellence in these endeavors.*

### Message from the Executive Director

Welcome to your Fall 2013 edition of the IAS Bulletin. We hope you had an enjoyable summer and were able to accomplish what you had planned. With the arrival of fall there is much to accomplish at the Academy. The ISTS Fall Conference is fast approaching and is breaking new ground by holding a combined conference with the Iowa Council of Teachers of Mathematics (ICTM).

The ISTS and ICTM leadership have been working together to create an informative conference for all attendees. They have been taking the best ideas of both groups, effectively demonstrating how two organizations are able to work together for the benefit of science and mathematics education. Everyone involved should be commended for having the foresight to bring science and mathematics educators together at one meeting. Information about the conference is found inside this issue with more available on the conference website at [www.ictm-ists-conference.org](http://www.ictm-ists-conference.org).

Each fall the Academy mails a large envelope with your dues renewal announcement. Please take a few moments to look through the packet to learn more about the Academy. We hope you will also renew your membership for 2014 as soon as possible and consider a donation to the Academy. Please help us reduce expenses by renewing as soon as possible. It saves dollars by reducing staff time spent on mailing and it reduces paper, printing and postage expenses. You may renew by mail or on line.

Because we are moving toward having more online communication with Academy members the mailings you receive become more important. We value contact with all of our members and do it through various publications, in print and online. We will be using online distribution of information as often as possible in order to save money. As announced at the IAS Annual Meeting the Academy is implementing a plan to significantly reduce expenditures and increase income during the next five years. One way to cut expenses is to reduce printing and mailing costs. This means using online publishing more often.

Thank you for being part of Iowa's general science organization.

Craig Johnson, Executive Director

### Is Planned Giving in Your Future?

If so consider a planned giving program that supports the Academy and offers tax benefits to you.

For an informational brochure contact the IAS Executive Director.

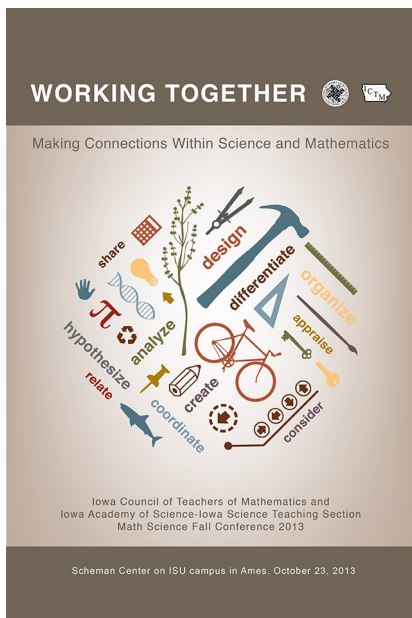
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# ICTM-ISTS Math Science Fall Conference

Wednesday, October 23, 2013

8:00 am until 4:00 pm

Scheman Center

Iowa State University

Visit the Conference Website to Register

<http://www.ictm-ists-conference.org/>

Advance Conference Program is Online

Sign up for a Professional Development Opportunity

Map, Directions and Hotel Information

Learn how the Conference is Going Green

- **New in 2013** - Combined Conference with ICTM (Iowa Council of Teachers of Mathematics).
- **New in 2013** - Interactive mobile app to feature program schedule at the conference.
- **New in 2013** - Learn about and contribute to the conference on Twitter.
- **New in 2013** - Stop at the STEM Cafe on second floor.
- Advance Program available online with descriptions of all sessions.
- Concurrent sessions covering all subjects and grade levels.
- Keynote speakers for both science and mathematics attendees.
- Award luncheons for both science and mathematics attendees.
- Exhibit Hall and door prizes.
- Network with science and mathematics colleagues from across Iowa.



## ISTS Tuesday Opportunities and Activities

October 22, 2013

Ames, Iowa

### Reception for NSF Presidential Award for Excellence in Mathematics and Science Teaching

**What:** Reception in honor of Iowa's 2012 Presidential Award winner in Mathematics and Science Teaching.

**When:** Tuesday, October 22nd, 4:30 until 10:00 p.m.

**Where:** Prairie Moon Winery and Vineyards, 3801 West 190th Street, Ames.

**Schedule:**

4:30—5:30 p.m., On-site Registration.

5:00—8:00 p.m., Connecting time with colleagues and Hub managers; wine tasting, hors d'oeuvres, and tours of the winery.

5:30 p.m., Welcome by ISTS Fall Conference Chair.

6:00 p.m., PAEMST award presentation.

7:00 p.m., "The Science of Beer Brewing and Wine Making," Michael Todd, Ames High School.

8:00—10:00 p.m., ISTS Chair Reception, Tasting room, desserts, and light refreshments.

### Next Generation Science Standards Updates

#### ***Iowa Task Force reviewing Next Generation Science Standards***

Currently in Iowa, a Task Force of volunteer citizens is learning all about the Next Generation Science Standards (NGSS) so that they may make a recommendation to the State Board of Education about whether Iowa should adopt NGSS. The Next Generation Science Standards were developed following *A Framework for K-12 Science Education* by the National Academies of Science in 2011 and through a multi-step review process that involved feedback from 26 states, including Iowa. The new standards represent several conceptual shifts for science education (see appendix A).

Learn more about NGSS at: <http://www.nextgenscience.org/next-generation-science-standards>.  
You can submit comments and ideas about NGSS to the taskforce by Friday, October 11th at:

**<https://www.surveymonkey.com/s/JBQM56P>**

More NGSS news on Page 4



# THE GLOBE PROGRAM

## Academy to Host NGSS Alignment Workshop

GLOBE community members from all across the US are preparing to come to Iowa to be a part of another NGSS team. In November, the Iowa Academy of Science will host GLOBE teachers, trainers and scientists as they come together for

a 2.5 day working meeting to align the GLOBE Program to NGSS. The GLOBE Program and NGSS Alignment Workshop is funded through a National Science Foundation Grant under the direction of Program Director, Marcy Seavey and will take place at the University of Northern Iowa. "It's going to be an intense two and a half days, with participants breaking into small groups to review GLOBE materials and rank their alignment to NGSS using a modified Achieve OER rubric and then sharing/defending their alignment to the rest of the team." The resulting alignment document will go through a review process and be integrated into the GLOBE Program website and made available to all US GLOBE Partnerships (like the Academy) for use at GLOBE workshops.

The GLOBE Program is a partnership between students, teachers and scientists in more than 110 countries to learn about the Earth's systems by monitoring local water, air, soil, land cover and seasons ([www.globe.gov](http://www.globe.gov)). GLOBE students learn science by doing it. IAS has sponsored GLOBE in Iowa since 1999 and served as host for the pilot program GLOBEone in 2004-2006. IAS Program Director, Marcy Seavey, was on the Iowa NGSS review team, is a member of the Iowa Dept. of Education Science Leadership Team steering committee, and has worked on previous standard alignment projects with GLOBE and Project WET. So it's no surprise that Iowa was approached to lead the alignment project and hospitality to make the GLOBE Program and NGSS Alignment workshop a success.

**Help Wanted.** On Saturday, November 10th, we need a few IAS members who would be willing to pick up 1-3 workshop participants at the Eastern Iowa Airport in Cedar Rapids, drive them to their hotel in Cedar Falls and then to the opening dinner on the UNI Campus. The Academy can reimburse these members for mileage and all hospitality drivers are invited to join us for Sunday dinner.

We also have just a couple of participants coming from so far away that they must arrive on Saturday. These participants are willing to pay for a hotel room out of their own pocket in order to participate in the workshop and may have to. However, maybe there is an Academy member or two in the Black Hawk County area, with a guest room in their house, who could provide home hospitality to one of these workshop participants on Saturday night, November 9th?

Academy members willing to serve as hospitality drivers or offer home hospitality to a fellow science supporter on Saturday night, please contact Marcy Seavey at [seavey@uni.edu](mailto:seavey@uni.edu). If you plan to be a driver, please include how many participants (and their luggage) you can fit in your car.

*"For almost 20 years GLOBE has engaged students in learning science by doing science. Our goal is to create a resource that will aid teachers and GLOBE community members to successfully implement NGSS." -Marcy Seavey*



**Abstract Submission Deadline:**  
**January 31, 2014**

Iowa scientists, engineers, science educators and science students are cordially **invited to submit abstracts to be considered for poster or oral presentation** at the 126th Annual Meeting of the Iowa Academy of Science. Whether your work is in progress or complete, you are encouraged to submit an abstract. Presenting at the IAS Annual Meeting is an excellent opportunity for you and your colleagues to interact with other Iowa scientists.

Our meeting offers a friendly atmosphere for undergraduate and graduate students to gain experience in presenting their research to others. *You do not need to be a member of the Academy to present at the Iowa Academy of Science Annual Meeting.*

**Abstract submission is open through Friday**  
**January 31, 2014.**

# Call for Papers

## 126th Annual Meeting

Iowa Academy of Science  
April 11 & 12, 2014  
Iowa Central Community College  
Fort Dodge Iowa

Abstract Submission includes publication of your abstract in the *Proceedings of the Iowa Academy of Science*, a complimentary conference registration for the primary presenter including access to more than 120 scientific presentations by Iowa scientists, keynote speakers, symposia presentations and more.



**Submit an Abstract Today!**

Visit [www.iacad.org](http://www.iacad.org).  
Click on the Submit Abstract button.





## All Puns Intended: New Facilitators Dive into Project WET

*Cloud, Ocean, Ocean, Ocean, Ocean...* some water molecules stay within one part of the water cycle for a very long time. Just like the 22 remarkable Project WET facilitators who have been representing the Academy and leading WET workshops across Iowa since 1999.

*Ocean, Cloud, Lake...* eventually all water moves on to other parts of the cycle, as have many of our facilitation team moving on to retirement or work in other states. On Earth, we are pretty much limited to the same amount of water now as was available a thousand and a million years ago. Luckily, that isn't the case for facilitator networks. The IAS Office overflowed with preparations for our first new facilitator training in 14 years.

*Lake, River, Ocean...* One of the first activities the inductees will experience is *the Incredible Journey*, which engages participants in a whole body model of how water moves through the water cycle. Through this activity secondary students discover not only where and how water moves through the water cycle but also that cycles are not circles - there isn't one path through the water cycle, there are many. The new facilitators came from across the state, each one planning to bring Project WET workshops to new audiences.

Current facilitator, Linda McCartney helped the new team members find their sea legs by assisting Program Director, Marcy Seavey, in facilitating the train-the-trainer workshop on the UNI campus Sept 13 and 14th and induct approximately 10 new facilitators into the Iowa team. This workshop is funded through a EPA mini-grant from the Region 7 EPA state EE collaborative, including the Iowa Conservation Education Coalition.

The Iowa Academy of Science has sponsored Project WET (Water Education for Teachers) in Iowa since 1999 and through the support of REAP-CEP, the Academy has provided preservice Project WET workshops for thousands of soon to be Iowa educators. As we enter the 14<sup>th</sup> year of sponsoring Project WET in Iowa, this really is just the tip of the iceberg. The new facilitators trained this month will increase the Academy's capacity to reach preservice educators across the state with Project WET professional development experiences. How many puns in all? I wash my hands of this Project WET update!

### Iowa Science Foundation

Each year the Iowa Academy of Science administers the state supported Iowa Science Foundation program. The Iowa Science Foundation Committee of the Academy accepts grant proposal submissions and oversees the review process that advances three areas of the Academy's mission; science research, science education, and the public understanding of science. A total of \$40,000 is available to fund grant proposals with a maximum of \$5,000 allowable for each grant.

Requests for funding for the 2013—2014 fiscal year from July 1, 2013 to June 30, 2014 totaled \$74,000 from 13 proposals. The committee granted funding to 10 proposals.

Proposals are due on January 31st for projects that will begin on July 1, 2014.

If you have questions about the ISF program please contact Craig Johnson in the ISF office at 319-273-2581 or by email at [craig.johnson@uni.edu](mailto:craig.johnson@uni.edu).

Download the ISF Brochure and Guidelines, at:

**<http://www.iacad.org/research.html>**

# Recognizing Excellence

## Distinguished Science Awards

The Academy Distinguished Science Awards program was established in 1980. These are the highest awards given by the Iowa Academy of Science. The Recognition and Awards Committee makes recommendations to the Board of Directors by March 1st.

### Distinguished Fellow Award

The highest award given by the Academy. It is intended to recognize exceptional scholarly activity to the national and international scientific community.

### Distinguished Iowa Science Teaching Award

Recognizes exceptional university and college faculty for their innovative science teaching.

### Distinguished Iowa Scientist Award

Intended for individuals deserving recognition within their own area of science and who have gained state-wide acclaim.

### Distinguished Service Award

Given to organizations and individuals for exceptional service to science technology or the application of science.

**Nomination Deadline: February 7th**

# Events and Deadlines

**ISTS Fall Conference, October 22—23, 2013**

### Deadlines

Advance mail-in registration - October 14

Advance online registration - October 19, 9:00 p.m.

**Iowa Junior Academy of Science Research**

### Proposal Deadline

November 29, 2013

**ESTA Nomination Deadline**

January 31, 2014

**Iowa Science Foundation Proposal Deadline**

January 31, 2014

**Distinguished Awards Nomination Deadline**

February 7, 2014

**126th Iowa Academy of Science**

### Annual Meeting

April 11-12, 2014

Iowa Central Community College

Fort Dodge, Iowa

## New Excellence in Science Teaching Award

A new category has been added to the ESTA. It is called Science Supervisory and it honors contributions by supervisors in district, private, AEA, museum, naturalist, or similar settings.

### Award Categories

- Physical Science
- Life Science
- Earth/Space/Environmental Science
- Science Supervisory
- General/Multiple Science
- Middle School/Junior High Science
- Elementary Science (two awards annually)

**Nomination Deadline: January 31st**

**Brochures for ESTA and Distinguished awards available at [www.iacad.org](http://www.iacad.org)**



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**Iowa Academy of Science**  
UNI -175 Baker Hall  
2607 Campus St.  
Cedar Falls, Iowa 50614-0508

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